

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (withdrawn) A hot water heating system for heating potable water, said heater being diesel powered and comprising a burner, an exhaust stack carrying hot exhaust emanating from said burner, a water jacket surrounding said burner for carrying potable water and being enclosed by an outer periphery, said exhaust stack running from said burner through said water jacket on a first pass for a longitudinal distance generally approaching the length of said water jacket on said first pass, said exhaust stack carrying said hot exhaust through said water jacket and discharging said hot exhaust from said outer periphery of said water jacket.

Claim 2 (withdrawn) A hot water heater as in claim 1 wherein said exhaust stack has a rectangular cross-sectional configuration.

Claim 3 (withdrawn) A hot water heater as in claim 1 wherein said exhaust stack is circular.

Claim 4 (withdrawn) A hot water heater as in claim 1 wherein said exhaust makes said first pass through said water jacket before discharge from said outer periphery of said water jacket.

Claim 5 (withdrawn) A hot water heater as in claim 1 wherein said exhaust makes said first and second passes through said water jacket before discharge of said exhaust from said outer periphery of said water jacket.

Claim 6 (withdrawn) A hot water heater as in claim 1 wherein said exhaust stack contacts said liquid within said water

jacket on all sides of said exhaust stack.

Claim 7 (withdrawn) A hot water jacket as in claim 1 wherein said exhaust stack contacts said liquid within said water jacket on at least one side of said exhaust stack

Claim 8 (withdrawn) A hot water heating system as in claim 1 wherein said heater is used for boats or vehicles.

Claim 9 (withdrawn) A hot water heating system as in claim 1 and further comprising operating components associated with said heating system and being located within a housing which housing surrounds said burner, said operating components being located at and accessible from one end of said heating system upon removal of a portion of said housing.

Claim 10 (withdrawn) A hot water heating system as in claim 9 wherein said operating components include a burner assembly, a compressor, a combustion fan and a fuel pump.

Claim 11 (withdrawn) A hot water heating system as in claim 10 and further comprising a hot water outlet and a cold water inlet located on said one end of said heating system.

Claim 12 (withdrawn) A hot water heating system with a burner and operating components associated with said burner, said burner and said operating components being located within a housing, said operating components being located at and accessible from one end of said heating system upon removal of a portion of said housing.

Claim 13 (withdrawn) A hot water heating system as in claim 12 wherein said operating components include a burner assembly, a compressor, a combustion fan and a fuel pump.

Claim 14 (withdrawn) A hot water heating system as in claim 13 and further comprising a hot water outlet and a cold water inlet located at said one end of said heating system.

Claim 15 (withdrawn)      A hot water heating system as in claim 1 and further comprising a zone heater operably connected to said hot water heating system through a heat exchanger.

Claim 16 (withdrawn)      A hot water heating system as in claim 1 wherein said potable water is circulated through said heat exchanger by a first pump and wherein coolant is circulated through said zone heater and said heat exchanger by a second pump.

Claim 17 (withdrawn)      A hot water heating system as in claim 16 and further comprising a thermostat operably connected to said zone heater to initiate operation of said zone heater when said thermostat includes a zone temperature below a predetermined value.

Claim 18 (withdrawn)      A hot water heating system as in claim 17 and further comprising a first aquastat associated with said zone heater to initiate and to terminate operation of a fan associated with said zone heater.

Claim 19 (withdrawn)      A hot water heating system as in claim 18 and further comprising an aquastat associated with said potable water circulated through said heat exchanger, said aquastat terminating operation of said first pump when said aquastat measures a temperature which has fallen below a predetermined value.

Claim 20 (withdrawn)      Method of increasing the temperature of potable water used for human consumption, said potable water being carried in a water jacket surrounding a burner having a peripheral housing and which burner discharges hot exhaust from said peripheral housing, said method comprising conveying said hot exhaust from said burner through said water jacket to said peripheral housing and discharging said hot exhaust from said peripheral housing.

Claim 21 (withdrawn) Method as in claim 20 wherein said hot exhaust is discharged from said peripheral housing after making one pass through said water jacket.

Claim 22 (withdrawn) Method as in claim 20 wherein said hot exhaust is discharged from said peripheral housing after making more than one pass through said water jacket.

Claim 23 (withdrawn) Method as in claim 20 wherein said potable water is for marine or vehicle use.

Claim 24 (currently amended) A hot water heater for heating water, said heater being diesel powered and comprising a burner having an axis and an open end, said burner being operable to have combustion taking place within said burner, an exhaust jacket surrounding said burner to carry the exhaust of said combustion leaving said burner from said open end, an exhaust manifold connected to said exhaust jacket by an opening located at the end of said burner remote from said open end, said exhaust manifold being operable to carry said exhaust emanating from said burner from said opening, a water jacket carrying said water and being defined by an outer circumference of a water tank which water tank surrounds said burner, ~~[[and]]~~ said exhaust jacket and said exhaust manifold, said water tank further being defined by concave end portions on opposite ends of said tank which are in contact with said water, ~~said exhaust manifold being separate from said burner and said exhaust jacket, said opening communicating between said exhaust jacket and said exhaust manifold,~~ said exhaust manifold running from said opening through said water jacket for a longitudinal distance generally approaching the length of said water jacket and being generally parallel to the axis of said burner, said exhaust manifold carrying said hot exhaust through said water jacket and discharging said hot exhaust from said exhaust manifold to an exhaust stack located remotely from said opening.

Claim 25 (original) A hot water heater as in claim 24 wherein said heater is for boats or vehicles.

Claim 26 (original) A hot water heater as in claim 24 wherein said heater is for residential use.

Claim 27 (withdrawn) A hot water heating system for heating potable water, said heater being diesel powered and comprising a burner, an exhaust stack carrying hot exhaust emanating from said burner, a water jacket surrounding said burner for carrying potable water and being enclosed by an outer periphery, said exhaust stack running on a first pass from said burner through said water jacket for a longitudinal distance which approaches the length of said water jacket on said first pass, said exhaust stack carrying said hot exhaust through said water jacket and discharging said hot exhaust from said outer periphery of said water jacket.

Claim 28 (withdrawn) A hot water heating system as in claim 27 and further comprising a zone heater operably connected to said water jacket and located remotely from said burner of said heating system in a living environment, said potable water in said water jacket circulating through a heat exchanger operably associated with said zone heater thereby simultaneously providing hot water for the personal use of a user and providing hot water which is operably associated with said zone heater.

Claim 29 (withdrawn) A hot water heating system as in claim 28 wherein said zone heater includes a fan for conveying hot air from said zone heater into said living environment.

Claim 30 (withdrawn) A water level sensor in a potable water and diesel powered heater, said water level sensor producing a signal when said water within said heater is beneath a predetermined level, said signal being operable to terminate operation of said heater.

Claim 31 (withdrawn) Coolant heater for heating coolant and circulating said heated coolant through a boat, vehicle or other living area, said coolant heater comprising a

coolant stack carrying gases from a burner, said coolant stack being located within a coolant jacket and said coolant stack terminating in an exhaust stack releasing said hot gases to the atmosphere, said coolant stack being in a configuration that allows said exhaust stack to exit said water heater at at least two exhaust stack exit locations.